

12. Wind energy facility according to Claim 11, characterized in that the tube is connected at the air inlet side to a ventilation device (fan), by means of which heated air is blown into the tube.

13. Wind energy facility according to one of the preceding Claims 10-12, characterized in that the tube is more than ten meters long, preferably more than twenty-five meters long, and it is formed in the lower part of the tower such that heated air originating from an electrical device for converting electrical energy, e.g., at a switching box or a power box, is blown through the tube, and heated air is output again at the tube outlet, so that it can be cooled at the tower wall and then flow back to the tower base.

14. Wind energy facility according to one of the preceding claims, characterized in that the nacelle is completely or partially made out of a metal, preferably aluminum.

15. Wind energy facility according to Claim 14, characterized in that the nacelle is equipped completely or partially with cooling ribs or other means for increasing the surface area of the nacelle.

Abstract

The conversion of energy regularly results in losses in the form of heat. This applies both for the conversion of kinetic energy of wind into electrical energy in the generator of a wind energy facility, where these losses regularly occur in the main driving line of the wind energy facility, and also for the electrical feeding of energy generated by the wind energy facility into a medium voltage network. For this purpose, regular devices of power electronics, e.g., rectifiers, and/or transformers, are necessary. In the main driving line, which is mounted in the nacelle for a wind energy facility, the losses occur overwhelmingly in the gears, at the bearings, and in the generator or at other control units, such as, e.g., in the hydraulic systems or similar control and regulation units, which adjust the rotor blades or turn the wind energy facility into the wind. For gearless wind energy facilities, e.g., model E-66 of Enercon, the main losses occur at the main driving line in the generator, i.e., in the nacelle (head) of the wind energy facility.

The task of the invention is to prevent the previously mentioned disadvantages and to provide a cooling device for a wind energy facility, which reduces the losses of the wind energy facility.

Wind energy facility (1) with a completely closed or at least partially closed cooling circuit, with which the heat to be dissipated from the cooling circuit is dissipated by the tower (3) or the nacelle (2) of the wind energy facility (1).